

REMARKS

Claims 1-3, 5-6, 8, 14 and 16-26, all the claims pending in the application, stand rejected on prior art grounds. Applicants herein amend claims 1-3, 5, 6, 8, and 14. Applicants respectfully traverse the rejections based on the following discussion.

I. The Prior Art Rejections

Claims 1-3, 16-17, 19 and 26 stand rejected under 35 U.S.C. §102(e) as being anticipated by Palalau (U.S. Patent No. 6,266,035), hereinafter referred to as “Palalau I.” Claims 5-6 and 20-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Arakawa (U.S. Patent No. 6,268,843) in view of Palalau. Claims 18 and 25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Palalau, in view of Friend, et al. (U.S. Patent No. 6,052,279), hereinafter referred to as “Friend.” Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Arakawa, in view of Palalau and Friend. Claims 14 and 23-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Toffolo, et al. (U.S. Patent No. 6,337,675), hereinafter referred to as “Toffolo,” in view of Palalau et al. (U.S. Patent No. 6,049,324), hereinafter referred to as “Palalau II.” Applicants respectfully traverse these rejections based on the following discussion.

Palalau I teaches a display system generally comprising an ELD including a plurality of pixels each activated by a voltage across an inner and outer electrode. A controller applies voltages to each of the pixels via the inner and outer electrodes at a refresh rate to illuminate the pixels. The controller varies the voltage and refresh rates of each of the plurality of pixels in order to provide varying levels of brightnesses of the pixels.

Arakawa teaches an image display apparatus including an active display device, which is

divided into picture elements, and a passive display device, which is divided into picture elements and which is superposed upon the active display device. The image display apparatus has a high luminance resolution and a high definition.

Friend teaches a customizable hand-held data terminal system employs multiple housing bases able to accommodate different components allow the manufacture of hand-held data terminals with a variety of features based on a single design. Because the system does not require the external mounting of components, the ergonomics and basic footprint of the unit remains unaltered. The system also alleviates problems with moisture resistance, shielding, and survivability under harsh treatment associated with terminals employing externally mounted end cap modules or pod. The system employs a plurality of different sized base units which can accommodate a variety of different components and configurations, and wherein the different base units are interchangeable with a single upper surface and user interface comprising a display screen and keypad.

Toffolo teaches a display system provides automatic and manual brightness control. A brightness controller varies the luminance of the display based upon ambient light as sensed by an ambient light sensor. The brightness control varies the luminance of the display between the minimum luminance at a minimum illuminance to a maximum luminance at a maximum illuminance. Preferably, a user input device selectively varies the maximum illuminance at which the display displays said maximum luminance and selectively alters the minimum luminance which is displayed at the minimum illuminance.

Palalau II teaches a display system that includes a decoder receiving frames each including a brightness code for each pixel. The decoder generates a plurality of refresh commands for each pixel in the frame based upon the brightness codes and stores each of the

refresh commands in a different memory buffer. A driver reads the memory buffers sequentially at a refresh rate and drives the display based upon the refresh commands in each memory buffer.

However, amended independent claims 1, 5, and 14 contain features, which are patentably distinguishable from the prior art references of record. Specifically, claim 1 recites, in part, “...a power source detector connected to said display controller, said power source detector being adapted to detect whether said display apparatus is being powered by an alternating current power source or a direct current power source such that said refresh rate of said display screen is lower when said direct current power source is providing power to said display apparatus compared to when said alternating current power source is providing power to said display apparatus....”

Similarly, claim 5 recites, in part, “...a power source detector adapted to detect whether said display apparatus is being powered by an alternating current power source or a direct current power source such that said refresh rate of said display panel is lower when said direct current power source is providing power to said display apparatus compared to when said alternating current power source is providing power to said display apparatus....” Likewise, claim 14 recites, in part, “...detecting whether said computer is being powered by an alternating current power source or a direct current power source such that said refresh rate of said display screen is lower when said direct current power source is providing power to said computer compared to when said alternating current power source is providing power to said computer....”

In fact, Palalau I, Palalau II, Arakawa, and Toffolo are bereft of any language relating to a device or component for detecting the type of power source which is powering their respective systems, let alone linking the frequency of the refresh rate depending on the type of power source being used. Moreover, incorporating such a feature in any of Palalau I, Palalau II,

Arakawa, or Toffolo would be unobvious because none of the devices/systems described in these prior art references are concerned with lowering the power consumption of the respective device/system.

Conversely, power consumption management is a matter which the claimed invention, not only addresses, but also solves by using the power source detector to detect the kind of power source (either AC or DC) being used to power the display apparatus and/or computer and raising or lowering the refresh rate depending on whether the power source is an AC or DC power source. Therefore, the claimed invention is patentably distinguishable from Palalau I, Palalau II, Arakawa, or Toffolo, alone or in various combinations with one another.

Furthermore, Friend refers to power consumption (see column 4, lines 34-43), but in the way the claimed invention provides. The hand-held computer in Friend utilizes photosensors for powering the computer rather than strictly relying on the self-contained DC battery source in the hand-held computer in Friend. In fact, Friend indicates that its battery source is rechargeable using electrical contacts to perform the recharging (see column 5, lines 7-9), and as such teaches away from even utilizing an AC power source. Thus, a proper reading of Friend would indicate that Friend's hand-held computer is incapable of detecting whether an AC power source is powering its computer, and as such, linking the refresh rate frequency to whether the hand-held computer is operating in an AC mode or a DC mode is practically impossible in Friend. Thus, the claimed invention is patentably distinct from Friend as well.

In view of the foregoing, the Applicants respectfully submit that the collective cited prior art references do not teach or suggest the features defined by amended independent claims 1, 5, and 14 and as such, claims 1, 5, and 14 are patentable over Palalau I, Palalau II, Arakawa, Toffolo, or Friend alone or in various combinations with one another. Further, dependent claims

2-3, 6, 8, and 16-26 are similarly patentable over Palalau I, Palalau II, Arakawa, Toffolo, or Friend alone or in various combinations with one another, not only by virtue of their dependency from patentable independent claims, respectively, but also by virtue of the additional features of the invention they define. Additionally, the fact that five separate references are being combined in various combinations with one another in order to try and teach, but failing nonetheless, the claimed invention is indicative of unobviousness itself. Moreover, the Applicants note that all claims are properly supported in the specification and accompanying drawings, and no new matter is being added. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections.

II. Formal Matters and Conclusion

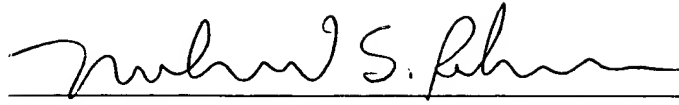
With respect to the rejections to the claims, the claims have been amended, above, to overcome these rejections. As such, the Examiner is respectfully requested to reconsider and withdraw the rejections to the claims.

In view of the foregoing, Applicants submit that claims 1-3, 5-6, 8, 14 and 16-26, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary. Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 50-0510.

Respectfully submitted,

Dated: August 17, 2004

A handwritten signature in black ink, appearing to read "Mohammad S. Rahman", written over a horizontal line.

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